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**United States Patent** [19][11] **Patent Number:** **5,483,745****Izumi**[45] **Date of Patent:** **Jan. 16, 1996**[54] **ELECTRIC SHAVER**[75] Inventor: **Shunji Izumi**, Matsumoto, Japan[73] Assignee: **Izumi Products Company**, Nagano, Japan

3,141,239	7/1964	Meyer et al.	30/43.6
3,369,294	2/1968	Shaw et al.	30/43.6
3,717,780	2/1973	Hohne, Jr. et al.	310/112
4,910,869	3/1990	Labrijn	30/43.6

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[51] **Int. Cl.<sup>6</sup>** ..... **B26R 19/28**[52] **U.S. Cl.** ..... **30/43.6; 30/DIG. 2**[58] **Field of Search** ..... 30/43.4, 43.5,  
30/43.6, DIG. 1, DIG. 2; 310/47, 50, 112[56] **References Cited**

U.S. PATENT DOCUMENTS

3,043,996 7/1962 Hartwig et al. .

[57] **ABSTRACT**

An electric shaver including a plurality of motors and corresponding number of shearing units each substantially comprising an inner cutter and an outer cutter. The inner cutter of each one of the shearing units is directly connected to one of the motors so that each inner cutter is directly driven by each motor. The shearing units are arranged, for example, so as to be at corners of a triangle in the head portion of the shaver housing.

**6 Claims, 4 Drawing Sheets**